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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,276	03/05/2001	Toshihiro Sugiura	ADACHI P207US	4643
20210	7590	10/05/2005	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			HOYE, MICHAEL W	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/800,276	Applicant(s) SUGIURA ET AL.	
	Examiner Michael W. Hoye	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/5/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date 6/18/01.   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Specification*

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### *Claim Objections*

2. The claims appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 is objected to because of the following informalities:

- On page 45, line 4, “a center equipment” should be just --center equipment--.
- In line 5, “downward signal” should be --a downward signal--.
- In line 8, “upward signal” should be --an upward signal--.
- In line 14, “upward L” should be --an upward L--.
- In line 17, “upward H” should be --an upward H--.

Claim 2 is objected to because of the following informalities:

- On page 46, line 18, “transmission line” should be --a transmission line--.

Claim 3 is objected to because of the following informalities:

- On page 46, line 24, “transmission line” should be --a transmission line--.
- On page 47, line 2, “downward signal” should be --a downward signal--.
- In line 4, “upward L” should be --an upward L--.

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- In line 10, “upward H” should be --an upward H--.

Claim 4 is objected to because of the following informalities:

- On page 48, line 22, “outputted” should be --output--.

Claim 5 is objected to because of the following informalities:

- On page 49, line 5, “are constituted of” should be --constitute--.
- In line 7, “are constituted of” should be --constitute--.
- In line 11, “is constituted of” should be --constitutes--.
- In line 16, “is constituted of” should be --constitutes--.

Claim 6 is objected to because of the following informalities:

- On page 49, line 20, “on transmission line” should be --a transmission line--.
- In line 23, “downward signal” should be --a downward signal--.
- In line 25, “upward L” should be --an upward L--.
- On page 50, in lines 8-9, the claimed “center equipment and the terminal devices” appears to be backwards in referring to the upward H signal...can be transmitted between... and should be --terminal devices and the center equipment--.

Claim 7 is objected to because of the following informalities:

- On page 50, line 19, “upward L” should be --an upward L--.
- In line 20, “downward signal” should be --a downward signal--.
- In line 21, “downward signal” should be --a downward signal--.
- In line 21, “upward L” should be --an upward L--.
- On page 51, line 6, “upward H” should be --an upward H--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the other pair of power separation filters" in line 22 of the claim (page 48). There is insufficient antecedent basis for this limitation in the claim.

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: beginning at the end of claim 5, "and a choke coil connecting between either of said fifth terminal or said sixth terminal. "

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Peyrovian (USPN 5,7689,682), cited by the Examiner.

As to claim 1, note the Peyrovian reference which discloses a two-way or bi-directional CATV amplifier. The claimed CATV amplifier, provided on a transmission line between center equipment of a bi-directional CATV system and a terminal device, for amplifying downward signal in a predetermined frequency band flowing downwardly through the transmission line from the center equipment side to the terminal device side, and upward signal in a predetermined frequency band flowing upwardly through the transmission line from the terminal device side to the center equipment side, respectively, is met by trunk amplifier 29 as shown in Fig. 3. The claimed CATV amplifier comprising: a downward amplifying circuit for amplifying the downward signal is met by amplifier 45 in Fig. 3. The claimed upward L amplifying circuit for amplifying upward L signal which is the upward signal in a frequency band lower than that of the downward signal is met by amplifier 49. The claimed upward H amplifying circuit for amplifying upward H signal which is the upward signal in a frequency band higher than that of the downward signal is met by repeater/amplifier 40 (see the definitions of a amplifier and a repeater as described in Newton's Telecom Dictionary pages 49 and 623, respectively, where a repeater is used in digital systems for amplifying signals). The claimed first terminal and a second terminal for connecting the CATV amplifier to the transmission line on the center equipment side and on the terminal device side, respectively, is met by 26<sub>1</sub> (col. 4, lines 30-32) and 26<sub>2</sub> (col. 4, lines 55-57). The claimed pair of first filters, connected to the first terminal and the second terminal, respectively, for cutting off the upward H signal and selectively passing the downward signal and the upward L signal are met by the low pass (L) frequency filters 38<sub>1</sub> and 38<sub>2</sub> as shown in Fig. 3 (see col. 3, line 64 – col. 4, line 14 and col. 4, lines 63-67). The claimed pair of second filters, provided between each of the pair of first filters and the downward

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amplifying circuit, for cutting off the upward L signal and selectively passing only the downward signal are met by the high pass (H) frequency filters  $44_1$  and  $44_2$  as shown in Fig. 3 (see col. 4, lines 6-9 and lines 33-57). The claimed pair of third filters, provided between each of the pair of first filters and the upward L amplifying circuit, for cutting off the downward signal and selectively passing only the upward L signal are met by the low pass (L) frequency filters  $44_1$  and  $44_2$  as shown in Fig. 3 (see col. 4, lines 6-14 and lines 58-67). The claimed pair of fourth filters, provided between the first terminal and the upward H amplifying circuit and between the second terminal and the upward H amplifying circuit, respectively, for cutting off the downward signal and the upward L signal and selectively passing only the upward H signal are met by the high pass (H) frequency filters  $38_1$  and  $38_2$  as shown in Fig. 3 (see col. 3, line 64 – col. 4, line 6 and col. 4, lines 19-35).

As to claim 2, the claimed bi-directional CATV system comprising a plurality of CATV amplifiers set forth in claim 1 provided on transmission line between a center equipment and a terminal device, wherein said downward signal, upward L signal and upward H signal can be respectively transmitted between the center equipment and the terminal device is met by the CATV amplifier 29 as described above in the rejection of claim 1, and by the plurality of CATV amplifiers 29, as shown in Fig. 2, that are provided on a transmission line 26 between head end 12 and subscriber unit(s) 14.

As to claim 3, the claim is rejected on similar grounds as the rejection of claim 1 as described above. The claimed upward signal amplifier, provided on transmission line between a center equipment of a bi-directional CATV system and a terminal device is met by the repeater/amplifier 40 as contained in element 35, which is provided on transmission line 26

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between head end 12 and subscriber unit 14 (see Figs. 2 and 3). The claimed [upward signal amplifier 35/40] being attached externally to an existing CATV amplifier for amplifying downward signal in a predetermined frequency band flowing downwardly through the transmission line from the center equipment to the terminal device, and upward L signal in a predetermined frequency band flowing upwardly through the transmission line from the terminal device to the center equipment, respectively, constituting a CATV amplifier set forth in claim 1 along with the existing CATV amplifier is met by amplifier 36 as shown in Fig. 3 and as described above in claim 1. The remainder of the claim language is met by claim 1 as previously described above.

As to claim 6, the claim is rejected based on a combination of the rejection of claims 3 and 2, as described above.

#### *Allowable Subject Matter*

8. Claims 4-5 and 7 are objected to (and claims 4-5 are also rejected under 112 2<sup>nd</sup> paragraph) as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 4-5, the prior art, alone or in combination, does not teach or fairly suggest the claimed, "upward signal amplifier set forth in claim 3, further comprising: a pair of power separation filters, provided at least either between said third terminal and said first and fourth filters, or between said fourth terminal and said first and fourth filters, for separating alternating current power signals for power supply, transmitted from an external power unit to



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the third terminal or the fourth terminal via said transmission line, from each of said downward, upward L and upward H signals; and a power supply circuit for generating power voltage to operate said upward H amplifying circuit and supplying the power voltage to the upward H amplifying circuit upon receipt of the alternating current power signals separated at one of the pair of power separation filters, wherein the alternating current power signals separated at the other of the pair of power separation filters are output from said fifth terminal or sixth terminal to the terminal for inputting the downward signal and outputting the upward L signal or the terminal for inputting the upward L signal and outputting the downward signal of said existing CATV amplifier.”

Regarding claim 7, the prior art, alone or in combination, does not teach or fairly suggest the claimed, “bi-directional CATV system set forth in claim 6, wherein in the plurality of CATV amplifiers connected to said transmission line via said upward signal amplifier, the fourth terminal and the sixth terminal of the upward signal amplifier provided for a first CATV amplifier located at a predetermined distance from the center equipment side are terminated at the characteristic impedance of the transmission line, a terminal for inputting an upward L signal and outputting a downward signal of the first CATV amplifier and a terminal for inputting a downward signal and outputting an upward L signal of a second CATV amplifier located at the next stage to the first CATV amplifier are directly connected via the transmission line, the fifth terminal of the upward amplifier provided for said second CATV amplifier is terminated at the characteristic impedance of the transmission line, and the third terminal of the upward signal amplifier provided for the second CATV amplifier is connected to the center equipment via an optical transmission path capable of converting electrical signal to optical signal, so that the

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upward H signal transmitted from CATV amplifiers located closer to the terminal device than the second CATV amplifier is directly transmitted to the center equipment via the optical transmission path.”

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baran et al (USPN 6,049,693) – Discloses an upstream ingress noise blocking filter for a cable television system.

Dormans (USPN 3,924,187) – Discloses a two-way cable television system with enhanced signal-to-noise ration for upstream signals.

Dufresne et al (USPN 4,982,440) – Discloses a CATV network with addressable filters receiving MSK upstream signals.

Dufresne et al (USPN 5,126,840) – Discloses a filter circuit receiving upstream signals for use in a CATV network.

Inaguma (USPN 6,581,208) – Discloses an up-converter and down-converter for an in-building CATV system.

McAlear (USPN 6,598,232) – Discloses a hybrid amplifier-regenerator for optimizing cable network transmissions.

Peyrovian (USPN 5,822,677) – Discloses a shared hybrid-fiber coax transmission system having increased bandwidth in the upstream and downstream directions, and line extender amplifiers.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoyer whose telephone number is **571-272-7346**.

The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

**Any response to this action should be mailed to:**

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **571-272-2600**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Michael W. Hoyer  
September 23, 2005

  
**JOHN MILLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**